as it is patulous before attempting to pass instruments. In regard to the problem of intra-uterine therapy, it has been found that chronic infection of the corpus uteri speaks for almost certain involvement of other pelvic organs. Intra-uterine applications are therefore of little avail, for the most important focus of infection is well beyond their reach. Again, in the absence of bacteria it may be desired to rid the patient of a persistent discharge. Study of this question makes it appear that mucus secreted from the body of the uterus is in very small amount and limited mostly to the premenstrual period. In the cervix are glands, prolific in activity, especially adapted to mucous secretion. It is here, in the cervix, up to the level of the internal os, that we will do best to look for infection, and it is against discharge from the cervix that treatment can be efficiently directed.

OPHTHALMOLOGY

UNDER THE CHARGE OF
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Physiological Tension of the Eyeball.—In an extensive study of this subject running through three numbers of the *Ann. d'Oculistique*, May, 1917, p. 272; June, p. 334; July, p. 385) MAGITOT sums up as follows: The normal tension of the eyeball oscillates between 15 and 25 mm. Hg.; it may vary between these limits from day to day and even during the same day. It is apparently lower in the aged than in the young. The tension corresponds to variations of the general arterial pressure, though the globe possesses an autoregulating mechanism which serves to oppose increase of pressure. The factors capable of influencing the ocular tension are: (*a*) the general circulation, (*b*) the local circulation, (*c*) the structure of the walls of the globe itself. The latter is extensible in the adult to a certain degree, owing to the numerous elastic fibers of the sclera. The variations of the tension within normal limits are due principally to the variations of the general arterial pressure, a relationship which may be compared to that of the pulse and the temperature. But the intra-ocular tension responds to a far greater degree to variations in the local circulation than to those of the general. Among nervous influences the cervical sympathetic or its ganglia is alone capable of influencing the tension of the globe, and not the trigeminal. Section of the cervical sympathetic or superior cervical ganglion produces slight *hypertonia;* excitation determines a *hypotonia* in all animals. The sympathetic centers capable of modifying the ocular tension are three in number: (*a*) the bulbomedullary centers (primary centers) possess an action particularly dilating; (*b*) the cervical and cephalic centers (secondary centers) possess an action particularly constricting; the action of the ocular center (*c*), tertiary center, is variable. Of these centers the role of the ocular is the most important; it is the true regulating organ. The aqueous humor has no influence upon the ocular tension. Collyria have little influence. The slight effect which they exert depends upon their action upon the diameter of the uveal vessels. Finally, the tension of the globe is solely under the influence of the greater or less repletion of the ocular vessels. These vessels are themselves governed by the vasomotor nerves. But the capital importance which the sympathetic ocular center (tertiary center) plays in the innervation cannot be too much insisted upon.

Acute Infectious Retrobulbar Optic Neuritis.—Lenoir (*Ann. d'Oculistique*, July, 1917, p. 411) argues that this condition possesses a special symptomatology which differentiates it sharply from other diseases of the optic tract. The functional disturbances consist of rapid and frequently great diminution of the visual acuity, with deep periorbital pains, increased by pressure upon the globe and extreme excursions of the same. The ophthalmoscopic appearances are ordinarily slight or absent, simply at times some infiltration of the optic disk. There is an absolute central scotoma, and more rarely, irregular contraction at the periphery. The affection develops rapidly in the course of a few weeks, and generally heals without notable visual impairment in spite of the atrophic appearance of the disk. Alternating, relapsing and binocular cases occur, but in the latter the two eyes are always affected successively and the evolution of the lesions presents no symmetrical character. The disease is frequently complicated by more or less severe disturbances of the nervous system, which may simulate intracranial hypertension, but of which the prognosis is favorable. The cause cannot be attributed to sclerosis *en plaques* nor to syphilitic or rheumatic infection, but presents all the marks of an infectious lesion. Frequently consecutive to mild infections of the rhinopharynx it seems in certain cases to be dependent upon lesions of the sinuses, particularly the sphenoidal. Whatever be the origin the inflammation of the sheath of the optic nerve causes compression of the nervous elements, of the macular bundle in particular and lesions of degeneration whose gravity is in direct ratio to the duration and intensity of the inflammatory process.

Ocular Signs of Death.—Terson (*Arch. d'Ophtal.*, May–June, 1917, p. 513) describes the early and late ocular signs of death. The reaction of the pupils was found to be variable. They responded slowly to light, as also to atropin and physostigmin for several hours after death; electricity sometimes contracted the pupil five or six hours after death. Cauterization, scraping, sulphate of copper and subconjunctival saline injections produced no redness in the still warm body two hours after supposed death. Instillations of ether may cause damage; the reporter prefers dionin, which is followed by no reaction if applied two hours after death. These reactions may lead to important results in early cases of apparent death when other signs are still wanting.

Sympathetic Uveitis.—Morax (*Ann. d'Oculistique*, July, 1917, p. 426) shows that sympathetic infection may have, as its point of departure, traumatic lesions both of the anterior and posterior segments of the globe; the former are much the more common. Anatomopathological studies of the sympathizing eye present uniformity of choroidal lesions, characterized essentially by a nodular or diffuse thickening of the choroid from penetration of lymphocytes between the uveal layers. The writer holds that all microbiological researches (direct examination, cultures, inoculation) have given a negative result and that the idea of microbic infection must be abandoned in this disease. Anatomical researches have convinced him, as they have others, that the uveal inflammation shows identical lesions which constitute a characteristic picture. He believes that the introduction of a new technic or modification of those already known will hereafter disclose the active agent of this infection.

Ocular Affections in Pest.—Youdine (*Wiestnik Ophtal.*, t. xxvii, 21) has examined 19 eyes of 15 individuals dead of pest; 16 were enucleated two or three hours and 3 ten to thirteen hours after death. The lesions discovered were localized principally in the posterior segment, in the chorioretina. The author believes that iridocyclitis, serous iritis and non-suppurative kerato-iritis result from the propagation of the inflammatory process of the uveal tract. The lesions observed are as follows: The veins and capillaries of the choroid are widely dilated, especially marked in the posterior portions of the choroid near the optic disk; in the neighborhood of the ciliary body the dilatation is less. In some of the eyes the dilated vessel was seen in the section to fill up almost the entire thickness of the choroid. The vessel walls are thinned, the endothelium swollen. In some cases the wall was necrotic, the degenerated tissue being sometimes swollen and sometimes granular. In one case which lasted thirty-four days there was hyalin degeneration of the walls of the small vessels. The layers of the choroid contiguous to the retina were fitted with an exudate consisting of a structureless mass, filaments of fibrin, globules of hyalin and pigmented granulations; the same exudate also penetrated between the choroid and the retina. The latter membrane was thickened and its vessels gorged with blood; the vessel walls were distended with liquid, the perivascular spaces dilated. The nuclei of the endothelium were swollen at some points so as to project into the lumen of the vessel. The ganglion cells were slightly pigmented. The cells of the internal and external granular layers were swollen and showed a lack of chromatin. In the internal nuclear layer cystoid degeneration had taken place. In all the eyes examined the retina was more or less detached from the above-mentioned exudate between the choroid and retina. Bacteriological examination was negative in every case as regards the bacilli of bubonic plague. This negative result favors the opinion that the ocular lesions were due to toxins of the bacilli.

Ocular Manifestations of Icterohemorrhagic Spirochetosis.—Weekers and Firket (*Arch. d'Ophtal.*, September–October, 1917, p. 647) show that this infection gives rise to frequent and diverse ocular manifestations; these are icterus of the conjunctiva, simple hyperemia of the anterior segment of the eyeball, congestion of the iris, iritis, optic neuritis, retrobulbar neuritis, ocular herpes and subconjunctival hemorrhages. Hyperemia of the anterior segment, congestion of the iris and iritis are all probably phenomena due to a variable degree to a localization in the highly vascular uveal tract of the spirochete circulating in the blood just as it becomes fixed in the hepatic and renal tissue. These alterations in the uvea are generally benign; they may even recover spontaneously and easily yield to appropriate treatment. Optic neuritis and retrobulbar neuritis, likewise benign, are probably related to the presence of the spirochete in the cephalorachidian fluid and in the liquid which bathes the sheaths of the optic nerves. Ocular herpes is rare; it may give rise to lesions of the globe itself, particularly of the cornea, and thus cause permanent damage to the sight. Icterus of the conjunctiva and subconjunctival hemorrhage are of no special significance as regards the eye.

DERMATOLOGY

UNDER THE CHARGE OF

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Intravenous Foreign Protein in the Treatment of Psoriasis.—Scully (*Jour. Am. Med. Assn.*, November 17, 1917) reports favorable results in psoriasis from the injection of a foreign protein, the protein employed being a typhoid vaccine containing 100,000,000 organisms to each cubic centimeter. From three to five injections were given at intervals of three or four days, and following the third injection a 2 per cent. chrysarobin ointment was used on the body and a 5 per cent. ammoniated mercury ointment on the scalp and face. His conclusions are as follows: Intravenous vaccines alone do not clear up the lesions of psoriasis, though they do lessen the induration and inflammatory reaction. When used in conjunction with chrysarobin ointment the lesions clear up rapidly. Favorable results were obtained in chronic generalized cases resistant to other forms of treatment. Chrysarobin dermatitis is prevented by the vaccine, and when present yields promptly. (We must confess to a very decided skepticism as to the real value of these injections; it is to be kept in mind that the eruption of psoriasis frequently diminishes or even disappears for a time without any treatment.—M. B. H.)

Treatment of Frost-bite.—Camescasses (*Le Bull. Med.*, January 26, 1918) highly recommends the following mixture in the treatment of frost-bite: Picric acid, 0.25; alcohol, glycerin, āā 10. This is painted over the affected parts twice a day, allowed to dry and should not be wiped off. After the second application the itching, pain, redness and swelling disappear. When ulcers are present, these are treated with zinc oxide paste.